

PTO/SB/21 (01-08)

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Total Number of Pages in This Submission

Application Number 10/800,070

Filing Date 06/20/2003

First Named Inventor Osteryoung et al.

Art Unit 1638

Examiner Name Kubelik, A.R.

Attorney Docket Number MSU-08153

ENCLOSURES (Check all that apply)

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Remarks

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	Medlen & Carroll LLP		
Signature	<i>Maha Hamdan</i>		
Printed name	Maha A. Hamdan		
Date	May 23, 2008	Reg. No.	43,655

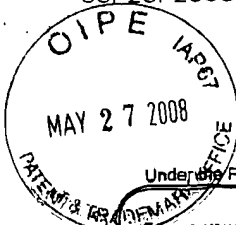
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PTO/SB/17 (10-07)

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FEE TRANSMITTAL

For FY 2008

☒ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$) 105.00

Complete If Known

Application Number 10/600,070
 Filing Date 06/20/2003
 First Named Inventor Osteryoung, et al.
 Examiner Name Kubelik, A.R.
 Art Unit 1638
 Attorney Docket No. MSU-08153

METHOD OF PAYMENT (check all that apply)

☒ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify):☒ Deposit Account Deposit Account Number: 08-1290 Deposit Account Name: Medlen & Carroll LLP

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FEE CALCULATION

1. BASIC FILING, SEARCH, AND EXAMINATION FEES

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	
Utility	310	155	510	255	210	105	
Design	210	105	100	50	130	65	
Plant	210	105	310	155	160	80	
Reissue	310	155	510	255	620	310	
Provisional	210	105	0	0	0	0	

2. EXCESS CLAIM FEES

Fee Description

Each claim over 20 (including Reissues)

Fee (\$)

Small Entity Fee (\$)

Each independent claim over 3 (including Reissues)

50

25

Multiple dependent claims

210

105

370

185

Total Claims Extra Claims Fee (\$)

- 20 or HP = x 25 =

HP = highest number of total claims paid for, if greater than 20.

Indep. Claims Extra Claims Fee (\$)

- 3 or HP = x 105 =

HP = highest number of independent claims paid for, if greater than 3.

Multiple Dependent Claims

Fee (\$)

Fee Paid (\$)

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(c)), the application size fee due is \$260 (\$130 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(a).

Total Sheets Extra Sheets Number of each additional 50 or fraction thereof Fee (\$)

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4. OTHER FEE(S)

Non-English Specification, \$130 fee (no small entity discount)

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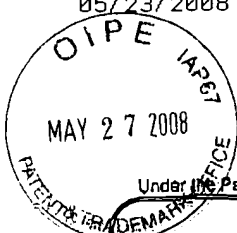
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SUBMITTED BY

Signature Mahattamdan Registration No. 43,855 Telephone 415.904.6500
 Name (Print/Type) Maha A. Hamdan Date May 23, 2008

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 36 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 20 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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FEE TRANSMITTAL

For FY 2008

☒ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$) 105.00

Complete if Known

Application Number 10/600,070

Filing Date 06/20/2003

First Named Inventor Osteryoung, et al.

Examiner Name Kubelik, A.R.

Art Unit 1638

Attorney Docket No. MSU-08153

METHOD OF PAYMENT (check all that apply)

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FEE CALCULATION

1. BASIC FILING, SEARCH, AND EXAMINATION FEES

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
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Fee Description	Fee (\$)	Small Entity Fee (\$)
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Each independent claim over 3 (including Reissues)	210	105
Multiple dependent claims	370	185
Total Claims	Extra Claims	Fee (\$)
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HP = highest number of total claims paid for, if greater than 20.		
Indep. Claims	Extra Claims	Fee (\$)
- 3 or HP =	x 105 =	
HP = highest number of independent claims paid for, if greater than 3.		

3. APPLICATION SIZE FEE

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Total Sheets Extra Sheets Number of each additional 50 or fraction thereof Fee (\$)

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4. OTHER FEE(S)

Non-English Specification, \$130 fee (no small entity discount)

Other (e.g., late filing surcharge): Information Disclosure Statement

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SUBMITTED BY

Signature	Maha Hamdan	Registration No. 43,655	Telephone 415.904.6500
Name (Print/Type)	Maha A. Hamdan	(Attorney/Agent)	Date May 23, 2008

This collection of information is required by 37 CFR 1.138. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Re Application of: Osteryoung *et al.*

Serial No.: 10/600,070

Group No.: 1638

Filed: 06/20/03

Examiner: Kubelik, A.R.

Entitled: **PLASTID DIVISION AND RELATED GENES,
PROTEINS, AND METHODS OF USE**

INFORMATION DISCLOSURE STATEMENT

Mail Stop Amendment
Assistant Commissioner for Patents
Washington, D.C. 20231

CERTIFICATE OF MAILING UNDER 37 CFR § 1.8(a)

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By: 

Cliff Cannon-Cin

Sir or Madam:

The citations listed below, copies attached, may be material to the examination of the above-identified application, and are therefore submitted in compliance with the duty of disclosure defined in 37 C.F.R. §§ 1.56 and 1.97.

Copies of the references listed as number 34-201 and 207-208 on the enclosed PTO-1449 are enclosed.

Copies of the patent references listed as numbers 1-33 on the enclosed PTO-1449 are not submitted in accordance with 37 CFR § 1.98(a)(2)(ii), since they are U.S. patents or U.S. patent application publications.

In accordance with 37 CFR 1.98 (d), copies of the references listed as 202-205, and 206 on the enclosed PTO-1449 are **not** submitted since they were cited by the Examiner in the Office Actions mailed, respectively, on 3/3/06 and 5/14/07 in the instant application.

The Examiner is requested to make these citations of official record in this application.

The following patents are referred to in the body of the specification:

- U.S. Patent No. 4,683,195 issued 7/28/87 to Mullis *et al.*;

- U.S. Patent No. 4,683,202 issued 7/28/87 to Mullis;
- U.S. Patent No. 4,965,188 issued 10/23/90 to Mullis *et al.*;
- U.S. Patent No. 5,352,605 issued 10/4/94 to Fraley;
- WO 95/14098 published 5/26/95;
- U.S. Patent No. 5,584,807 issued 12/17/96 to McCabe;
- U.S. Patent No. 5,837,458 issued 11/17/98 to Minshull *et al.*;
- U.S. Patent No. 5,830,721 issued 11/3/98 to Stemmer *et al.*;
- U.S. Patent No. 5,811,238 issued 9/22/98 to Stemmer *et al.*;
- U.S. Patent No. 5,733,731 issued 3/31/98 to Schatz *et al.*;
- U.S. Patent No. 5,223,409 issued 6/29/93 to Ladner *et al.*;
- U.S. Patent No. 5,198,346 issued 3/30/93 to Ladner *et al.*;
- U.S. Patent No. 5,096,815 issued 3/17/92 to Ladner *et al.*
- WO 88/06630 published 9/7/88;
- WO 92/09690 published 6/11/92;
- U.S. Patent No. 5,187,267 issued 2/16/93 to Comai *et al.*;
- U.S. Patent No. 5,057,422 issued 10/15/91 to Bol *et al.*;
- U.S. Patent No. 5,981,839 issued 11/9/99 to Knauf *et al.*;
- U.S. Patent No. 6,051,757 issued 4/18/00 to Barton *et al.*;
- U.S. Patent No. 5,981,840 issued 11/9/99 to Zhao *et al.*;
- U.S. Patent No. 5,824,877 issued 10/20/98 to Hinchee *et al.*;
- U.S. Patent No. 4,940,838 issued 7/10/90 to Schilperoort *et al.*
- U.S. Patent No. 5,501,967 issued 3/26/96 to Offringa *et al.*
- U.S. Patent No. 5,846,795 issued 12/8/98 to Ahlquist *et al.*;
- U.S. Patent No. 5,500,360 issued 3/19/96 to Ahlquist *et al.*;
- U.S. Patent No. 5,173,410 issued 12/22/92 to Ahlquist;
- U.S. Patent No. 5,965,794 issued 10/12/99 to Turpen;
- U.S. Patent No. 5,977,438 issued 11/2/99 to Turpen *et al.*;
- U.S. Patent No. 5,866,785 issued 12/2/99 to Donson *et al.*;
- WO 93/07278 published 4/15/93;
- U.S. Patent No. 5,451,513 issued 9/19/95 to Maliga *et al.*;

- U.S. Patent No. 5,545,817 issued 8/13/96 to McBride *et al.*;
- U.S. Patent No. 5,545,818 issued 8/13/96 to McBride *et al.*;
- WO 95/16783 published 6/22/95;
- EP 0 292 435 published 11/23/88;
- U.S. Patent No. 4,945,050 issued 7/31/90 to Sanford *et al.*;
- WO 94/13822 published 6/23/94; and
- U.S. Patent No. 6,063,947 issued 5/16/00 to DeBonte *et al.*

The following publications are referred to in the body of the specification:

- Osteryoung *et al.* (1998) "Chloroplast Division in Higher Plants Requires Members of Two Functionally Divergent Gene Families with Homology to Bacterial *ftsZ*," Plant Cell 10:1991-2004;
- Jiang *et al.* (1998) "Multivesicular bodies: a mechanism to package lytic and storage functions in one organelle?" Trends Cell Biol 7:362-367;
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- Reddy *et al.* (2002) "Overexpression of the *Arabidopsis thaliana* MinE1 bacterial division inhibitor homologue gene alters chloroplast size and morphology in transgenic Arabidopsis and tobacco plants," Planta. 215:167-176;
- Margolin (1998) "A green light for the bacterial cytoskeleton," Trends Microbiol. 6:233-38;
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- UniProt entry Q9FIG9 2001, www.pir.uniprot.org/cgi-bin/upEntry?id=Q9FIG9
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The following reference (copy not provided) was cited by the Examiner in the Office Action mailed 5/14/07 in the instant application:

- Maple *et al.* (2007) Annals Botany 99:565-679.

The following references were cited by the Applicant in the Amendment and Response to the Office Action mailed 2/26/08.

PATENT
Attorney Docket No. MSU-08153

- U.S. Patent No. 5,981,836 issued to Osteryoung;
- U.S. Patent No. 6,812,382 issued to Hitz *et al.*; and
- Vitha *et al.* (2003) *The Plant Cell* 15:1918-33.

Applicant has become aware of the following printed publication which may be material to the examination of this application:

- Koksharova *et al.* (2002) *J. Bacteriol.* 184:5524-5528. Koksharova *et al.* discloses a *Synechococcus* mutant FTN2 that has an N-terminal DnaJ domain. Koksharova *et al.* also discloses a cyanobacteria *Anabaena* species that is mutated in genes orthologous to *fin2* and *fin6* and that form akinete-like cells. However, Koksharova *et al.* does not disclose nucleotide SEQ ID NO:3, or the encoded amino acid SEQ ID NO:2.

This Information Disclosure Statement under 37 C.F.R. §§ 1.56 and 1.97 is not to be construed as a representation that a search has been made, that additional information material to the examination of this application does not exist, or that any one or more of these citations constitutes prior art.

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